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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/873,287	06/05/2001	Tomio Sugiyama	2635-16	4759
23117	7590	11/16/2004		
NIXON & VANDERHYE, PC 1100 N GLEBE ROAD 8TH FLOOR ARLINGTON, VA 22201-4714			EXAMINER OLSEN, KAJ K	
			ART UNIT	PAPER NUMBER
			1753	

DATE MAILED: 11/16/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Advisory Action**

Application No.

09/873,287

Applicant(s)

SUGIYAMA, TOMIO

Examiner

Kaj K Olsen

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--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 26 October 2004 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

**PERIOD FOR REPLY** [check either a) or b)]

- a) ☒ The period for reply expires 3 months from the mailing date of the final rejection.
- b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on \_\_\_\_\_. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.
2. ☐ The proposed amendment(s) will not be entered because:
- (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);
  - (b) ☐ they raise the issue of new matter (see Note below);
  - (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or
  - (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

NOTE: \_\_\_\_\_

3. ☐ Applicant's reply has overcome the following rejection(s): \_\_\_\_\_.
4. ☐ Newly proposed or amended claim(s) \_\_\_\_\_ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).
5. ☒ The a) ☐ affidavit, b) ☐ exhibit, or c) ☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: see attached discussion.
6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.
7. ☒ For purposes of Appeal, the proposed amendment(s) a) ☐ will not be entered or b) ☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

The status of the claim(s) is (or will be) as follows:

Claim(s) allowed: \_\_\_\_\_

Claim(s) objected to: \_\_\_\_\_

Claim(s) rejected: 1-6.

Claim(s) withdrawn from consideration: \_\_\_\_\_

8. ☐ The drawing correction filed on \_\_\_\_\_ is a) ☐ approved or b) ☐ disapproved by the Examiner.
9. ☐ Note the attached Information Disclosure Statement(s) (PTO-1449) Paper No(s). \_\_\_\_\_
10. ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's amendment of 10-26-2004 has been entered. Claims 1-6 remain rejected for the same reasons that claims 1-6 and 13 were previously rejected.
2. Applicant urges that Mase '693 does not teach the use of yttria. This is incorrect. See col. 11, line 66.
3. Applicant also urges that Radford teaches away from silica when the stabilizer is yttria. However, the passage of Radford that the applicant is referring to only sets forth specific examples of combinations of stabilizer and sintering aid, and those specific examples did not include silica with yttria. Just because Radford teaches using a different combination of stabilizer and sintering aid does not mean other combinations of stabilizer and sintering aid are not obvious. Radford discloses a short list of stabilizers (with yttria and calcia being especially preferred (col. 2, lines 58-60)) and a short list of sintering aids. A particular combination from these two lists (absent specific teachings against any particular combination) requires only routine skill in the art.
4. With respect to Kobayashi, applicant urges that because Kobayashi teaches adhering the electrolyte to the alumina body, a crystal phase of silicon dioxide does not exist. It is unclear how applicant came to this conclusion merely by Kobayashi's reference to an adherence of the two devices (couldn't the adherence be because of the formation of a boundary layer?). Please clarify how this discussion by Kobayashi refutes the rejection at all. By applicant's own admittance, SiO<sub>2</sub> present in the electrolyte liquefies to form a boundary layer (see p. 5, lines 12-17). Hence, if the prior art renders obvious the addition of SiO<sub>2</sub> to the electrolyte (as Kobayashi

and Radford do) then one would expect a boundary layer of SiO<sub>2</sub> to form. It has been well settled that a patent cannot be granted for an applicant's discovery of a result, even though it may have been unexpectedly good, which would flow logically from the teaching of the prior art.

5. With respect to Hayakawa, applicant urges that one wouldn't have looked to Hayakawa for a teaching of adding SiO<sub>2</sub> to an electrolyte. However, the point isn't that one wouldn't have added SiO<sub>2</sub> to an electrolyte, but rather that SiO<sub>2</sub> is present in conventional zirconia starting materials (like those utilized by Hayakawa) and those starting materials can still provide electrolytes with good mechanical properties. Applicant appears to be implying that because Mase didn't mention the presence of SiO<sub>2</sub>, it must not be present. This does not follow. The electrolyte of Mase could have had impurities and Mase and either did not discuss it or know it. The point of Hayakawa is that zirconia having SiO<sub>2</sub> impurities can still provide an electrolyte with good mechanical properties.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kaj Olsen whose telephone number is (571) 272-1344. The examiner can normally be reached on Monday through Thursday from 5:30 A.M. to 3:00 P.M. and on alternate Fridays.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nam Nguyen, can be reached on 571-272-1342. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

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applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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November 12, 2004

A handwritten signature in black ink, appearing to read 'Kaj K. Olsen', with a stylized flourish at the end.

**KAJ K. OLSEN**  
**PRIMARY EXAMINER**